

# § 45.59

(E)=effective length of superstructure in feet as defined in § 45.59.

## § 45.59 Definitions for superstructure corrections.

For the purpose of §§ 45.58 through 45.61—

(a) The standard height of a superstructure ( $H$ ) other than a raised quarter deck and the standard height of a trunk ( $H$ ) is determined by the formula:

$$H=[6.0+(L/300)] \text{ ft}$$

(b) The length of superstructure ( $S$ ) is the length of those parts of the superstructure which extends to the sides of the vessel and that lie within the length ( $L$ ).

(c) The effective length ( $E$ ) of a trunk is its length in the ratio of its mean breadth to  $B$ .

(d) The effective length ( $E$ ) of an enclosed superstructure of standard height or greater is its length “ $S$ ”.

(e) Where the height of an enclosed superstructure or trunk is less than the standard height ( $H_s$ ), the effective length ( $E$ ) is its length reduced in the ratio of its height to  $H_s$ .

(f) The effective length ( $E$ ) of a raised quarter deck of  $\frac{2}{3} H_s$  or greater that has no openings in the front bulkhead is its length up to a maximum of  $0.6L$ .

(g) The effective length ( $E$ ) of a raised quarter deck of less than  $\frac{2}{3} H_s$  or that does not have an intact front bulkhead is its length reduced by the ratio of its height to  $H_s$ .

TABLE 12(1)  
TABLES OF P VALUES

Length of Ship (feet)	Value of P
80 .....	0.1100
90 .....	0.1136
100 .....	0.1172
110 .....	0.1208
120 .....	0.1244
130 .....	0.1281
140 .....	0.1318
150 .....	0.1355
160 .....	0.1393
170 .....	0.1430
180 .....	0.1468
190 .....	0.1506
200 .....	0.1545
210 .....	0.1583
220 .....	0.1622
230 .....	0.1661
240 .....	0.1700
250 .....	0.1740
260 .....	0.1780

# 46 CFR Ch. I (10–1–08 Edition)

TABLE 12(1)—Continued  
TABLES OF P VALUES

Length of Ship (feet)	Value of P
270 .....	0.1820
280 .....	0.1860
290 .....	0.1900
300 .....	0.1941
310 .....	0.1982
320 .....	0.2023
330 .....	0.2065
340 .....	0.2106
350 .....	0.2148
360 .....	0.2190
370 .....	0.2233
380 .....	0.2275
390 .....	0.2318
400 .....	0.2361
410 .....	0.2400
420 .....	0.2437
430 .....	0.2472
440 .....	0.2506
450 .....	0.2537
460 .....	0.2567
470 .....	0.2595
480 .....	0.2621
490 .....	0.2645
500 .....	0.2667
510 .....	0.2688
520 .....	0.2706
530 .....	0.2723
540 .....	0.2738
550 .....	0.2751
560 .....	0.2762
570 .....	0.2772
580 .....	0.2779
590 .....	0.2785
600 .....	0.2788
610 .....	0.2790
620 .....	0.2790
630 .....	0.2789
640 .....	0.2785
650 .....	0.2779
660 .....	0.2772
670 .....	0.2768
680 .....	0.2760
690 .....	0.2751
700 .....	0.2740
710 .....	0.2728
720 .....	0.2715
730 .....	0.2700
740 .....	0.2684
750 .....	0.2667
760 .....	0.2648
770 .....	0.2628
780 .....	0.2607
790 .....	0.2584
800 .....	0.2560
810 .....	0.2532
820 .....	0.2504
830 .....	0.2476
840 .....	0.2448
850 .....	0.2420
860 .....	0.2392
870 .....	0.2364
880 .....	0.2336
890 .....	0.2308
900 .....	0.2280
910 .....	0.2252
920 .....	0.2224
930 .....	0.2196
940 .....	0.2168
950 .....	0.2140
960 .....	0.2112

TABLE 12(1)—Continued

TABLES OF P VALUES

Length of Ship (feet)	Value of P
970 .....	0.2084
980 .....	0.2056
990 .....	0.2028
1000 .....	0.2000

TABLE 12(2)

VALUES OF "A" FOR USE IN THE EXPRESSION  
 $P_1 = P + "A" (L/D - L/D_s)$ 

Length of Ship (feet)	Value of "A"
80 .....	0.00864
90 .....	0.00806
100 .....	0.00750
110 .....	0.00696
120 .....	0.00644
130 .....	0.00594
140 .....	0.00546
150 .....	0.00500
160 .....	0.00456
170 .....	0.00414
180 .....	0.00374
190 .....	0.00336
200 .....	0.00300
210 .....	0.00266
220 .....	0.00234
230 .....	0.00204
240 .....	0.00176
250 .....	0.00150
260 .....	0.00126
270 .....	0.00104
280 .....	0.00084
290 .....	0.00066
300 .....	0.00050
310 .....	0.00036
320 .....	0.00024
330 .....	0.00014
340 .....	0.00006
350 .....	0.00000

TABLE 12(3)

VALUES OF L/D<sub>s</sub>

Length of Ship (feet)	Value of L/D <sub>s</sub>
80 .....	6.50000
90 .....	6.76563
100 .....	7.03125
110 .....	7.29688
120 .....	7.56250
130 .....	7.82813
140 .....	8.09375
150 .....	8.35938
160 .....	8.62500
170 .....	8.89063
180 .....	9.19625
190 .....	9.42188
200 .....	9.68750
210 .....	9.95313
220 .....	10.21875
230 .....	10.48438
240 .....	10.75000
250 .....	11.01563
260 .....	11.28125
270 .....	11.54688
280 .....	11.81250
290 .....	12.07813
300 .....	12.34375

TABLE 12(3)—Continued

VALUES OF L/D<sub>s</sub>

Length of Ship (feet)	Value of L/D <sub>s</sub>
310 .....	12.60938
320 .....	12.87500
330 .....	13.14063
340 .....	13.40625
350 .....	13.67188
360 .....	13.93750
370 .....	14.20313
380 .....	14.46875
390 .....	14.73438
400 .....	15.00000

(h) Superstructures which are not enclosed have no effective length.

(i) When a lower deck is designated as the freeboard deck, that part of the hull which extends above the freeboard deck is treated as a superstructure so far as concerns the application of the conditions of assignment and the calculation of freeboard.

(j) A bridge or poop is enclosed only when access is provided whereby the crew may reach accommodations, machinery, or other working spaces inside the superstructure by alternative means that are available at all times when bulkhead openings are closed.

#### § 45.61 Correction for superstructures and trunks.

(a) Where the effective length  $E$  of superstructures and trunks that meet the requirements of subpart D of this part is  $1.0L$ , the minimum summer freeboard may be corrected by subtracting  $\frac{1}{2}H_s$ .

(b) Where the effective length of superstructures and trunks is less than  $1.0L$  the minimum summer freeboard may be corrected by subtracting a percentage of one-half of the standard superstructure height ( $H_s$ ) determined by the formula:

$$\text{Percentage} = (E/2L) (1 + E/L) \times 100$$

(c) To be eligible for the correction a trunk must—

(1) Be at least as strong and as stiff as a superstructure;

(2) Have no opening in the freeboard deck in way of the trunk, except small access openings;

(3) Have hatchway coamings and covers that meet §§ 45.143 through 45.147;

(4) Provide a permanent working platform fore and aft with guardrails;